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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,423	09/13/2004	Jukka Ranua	Lain-084	6248

7590 11/08/2006  
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EXAMINER

FORTUNA, JOSE A

ART UNIT PAPER NUMBER

1731

DATE MAILED: 11/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/507,423	<b>Applicant(s)</b> RANUA ET AL.	
	<b>Examiner</b> José A. Fortuna	<b>Art Unit</b> 1731	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 05 September 2006.
- 2a)  This action is **FINAL**.
- 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-19 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-19 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on 13 September 2004 is/are: a)  accepted or b)  objected to by the Examiner.
  - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All    b)  Some \*    c)  None of:
    - 1.  Certified copies of the priority documents have been received.
    - 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - 3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

2. The disclosure is objected to because of the following informalities: lines 3-6 of page 1 refer back to the claims. In order to improve reading, i.e., avoiding the reader to read back-and-forth from the specification to the claims and vice versa, referring back to the claims should be avoided. The referenced matter should be added to the specification.

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Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is vague and indefinite since the adjusting step(s) has/have not been clearly recited. The claim recites a method of adjusting the fibrous properties of a pulp, but only recites the steps of classifying the logs and therefore, it is unclear if the pulp is made using the classified logs or a pulp made using other fibers is changed using the fibers from the classified logs. Note also that claim does not include any defibering steps, so it reads in the use of classified logs as filler materials, e.g., sawdust. Also claim 1 is vague and indefinite since it does not indicate from where the rings are counted, i.e., from the butt, some branches, the top, etc.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1 and 17-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lundqvist, SE 9702513 A, (Derwent Abstract).

Lundqvist teaches analysis of wood quality, in which the woods for pulping are classified, *inter alia*, from the number of annual rings, see abstract. In the novelty of the invention, Lundqvist teaches that the wood is classified with data obtained from the rings of the tree, including the maturity of the fibers and /or different coarseness and that the wood is classified according to the proportion of the respective fiber classes present. From the latter statement it can be inferred a pulp can be made using such data, which directly is obtained by the number of rings, i.e., maturity of the tree(s). Therefore, it seems that Lundqvist teaches all the limitations of the above claims or at least the minor modification(s) to obtain the claimed invention would have been obvious to one of ordinary skill in the art.

5. Claims 1-13 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quick et al (U.S. Patent 6,231,721) in view of Lundqvist, cited above.

With respect to claim 1, Quick discloses a method for adjusting the fibrous properties of pulp to a preselected level (col. 3, lines 19-35), characterized in that in the manufacture of the pulp, a wood material is used (col. 3, lines 36-59), and discloses that the number of annual rings is related to maturity of the wood (col. 1, lines 16-21), which is related to a certain fiber dimension property (col. 3, lines 32-59).

Quick does not disclose expressly classifying the wood by log.

Lundqvist discloses classifying wood material by log according to the number of annual rings, i.e., maturity of the wood, into categories and having the benefits as compare to the prior

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art that “more accurate quality assessment are obtained as compared with measuring Log diameter and density,” i.e., prior art methods.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to classify logs as described by Lundqvist in the pulp production method of Quick to obtain the invention as specified in claim 1, since a more accurate quality assessment is obtained, see above.

With respect to claim 2, Quick discloses that most juvenile wood is generally discarded at the site of timber harvest (col. 1, lines 32-34), which the Examiner construes as classifying in connection with felling the wood.

Lundqvist discloses classifying logs during transport through a processing plant see Detailed Description.

With respect to claim 3, Lundqvist discloses that the wood material is classified mechanically (p. 2, ¶ 0025).

With respect to claim 4, Quick discloses that the wood material originates in southern pine (col. 3, lines 36-38), which the Examiner considers to be a tree that has a periodic growth habit.

With respect to claim 5, Quick discloses that the wood material is softwood (southern pine; col. 3, lines 36-38).

With respect to claim 6, Lundqvist discloses that the wood material is hardwood (p. 1, ¶ 0006, lines 17-19).

With respect to claim 7, Quick discloses that the fibre dimension property refers to the fibre length or the fibre coarseness (col. 3, lines 19-59).

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With respect to claim 8, Quick discloses that the wood material is classified according to the number of annual rings into different categories, the number of which is 2 (e.g., juvenile and mature; col. 1, lines 17-22), which is one specific point within the claimed range of 2 to 60.

With respect to claim 9, Quick and Lundqvist are applied as in the rejection to claim 1, above. Quick further discloses that the wood material is classified according to the number of annual rings, into the following category: less than 20 annual rings (col. 1, lines 17-22). Quick also discloses different fiber properties in 30-year-old trees (col. 3, lines 44-59), which the Examiner construes as representing the category 21 to 30 annual rings.

With respect to claim 10, Quick and Lundqvist are applied as in the rejection to claim 9, above. Quick discloses that the wood material is classified according to the number of annual rings, into the following categories: less than 10 annual rings (col. 1, lines 17-22), less than 20 annual rings (e.g., 15 year thinnings; col. 3, lines 36-57), and less than 30 annual rings (e.g., 30-year-old trees, col. 3, lines 44-59).

With respect to claim 11, Quick and Lundqvist are applied as in the rejection to claim 1. Quick discloses that the desired fibre dimension property is obtained by combining wood materials obtained from various categories (col. 4, lines 13-18).

With respect to claim 12, Quick discloses that the method can be used to manufacture chemical pulp (col. 10, lines 29-36). At the time of the invention, it would have been obvious to a person of ordinary skill in the art that the method can be used to manufacture pulp by either a mechanical, chemical, or chemi-mechanical process, since these are the processes available to produce pulp from wood material.

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With respect to claim 13, Quick that in case of softwood (col. 3, lines 36-38), to obtain a fibre length of less than 2.0 mm, a wood material is selected, wherein the wood material is 15-year thinnings (1.9 mm; col. 3, lines 53-57), which the Examiner construes to represent a category in which the number of the log's annual rings at the butt of the log is less than 20 annual rings.

With respect to claim 17, Quick and Lundqvist are applied as in the rejections to claims 1, 4, 7, 11, and 12, above.

With respect to claim 18, Quick and Lundqvist are applied as in the rejections to claims 1 and 11. Quick further discloses that a fibre product is made of the pulp (col. 4, lines 28-31).

6. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quick and Lundqvist as applied to claim 1 above, and further in view of Rydholm (Sven A. Rydholm, *Pulping Processes*, Interscience Publishers, Sept. 1967).

With respect to claims 14, 15, and 16, Quick discloses a fibre length of 2.1 mm for 7.5-year-old tops obtained from 30-year-old trees, and 2.7 mm fibre length from 30-year-old trees. Quick does not disclose expressly fibre length in annual ring categories recited in claims 14-16. The Examiner has interpreted the use of “...” to indicate a range.

Rydholm discloses that fiber length has a fairly wide distribution curve (p. 54, lines 17-18) due to heredity factors as well as growing conditions (page 54, lines 11-16). Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art that the fibre length would not only be dependent upon the number of annual rings, but also on the species selected and the conditions under which the tree grew. It would have further been



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obvious to select a species and an annual-ring-number category combination to optimize the fibre length to the dimension desired.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to consider fibre length variations as described by Rydholm in the log classification method of Quick and Lundqvist to obtain the invention as specified in claims 14-16.

The motivation would have been that the increase in fiber length during the juvenile period is of industrial importance, since increasing forest areas consist of plantations on short rotation periods, and because of the increasing use of thinnings as pulpwood (p. 54, lines 1-4).

#### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure in the art of "Pulp making."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José A. Fortuna whose telephone number is 571-272-1188. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



José A Fortuna  
Primary Examiner  
Art Unit 1731

JAF